### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

## WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-010718 Address: 333 Burma Road **Date Inspected:** 08-Dec-2009

City: Oakland, CA 94607

OSM Arrival Time: 1900 **Project Name:** SAS Superstructure **OSM Departure Time:** 700 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Tu Jun **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component: OBG/ TOWER** 

## **Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Shrikant Utekar was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

#### **HEAVY DOCK**

#### ULTRASONIC INSPECTION

## **OBG SEGMENT 4EAST**

This Quality Assurance (QA) Inspector performed conventional UT (Ultrasonic Testing) in conjunction with ABF Ultrasonic Testing (UT) department for detection of planar transverse indication.

Ultrasonic Testing (UT) performed on repair areas of the bottom panel splice weld between OBG segment 4AE and (OBE4A-003) utilizing scanning pattern A, B, C and D (Fig 6.7). American Bridge Fluor (ABF) request number was 12072009-2.

No relevant indications were found.

**BAY #10** 

## WELDING INSPECTION REPORT

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This QA Inspector randomly observed the following work in progress.

#### **SOUTH TOWER LIFT #4**

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 054069 performing Flux Cored Arc Welding process for the weld SSTL4-1K/L located on PCMK fit lug at top of 143m double diaphragm. ZPMC QC Mr. Tu Jun monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-B-T-4332-TC-P4-F.

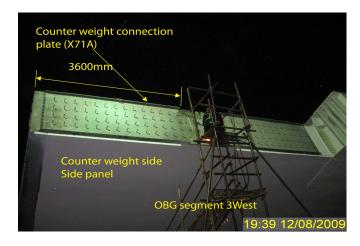
This Quality Assurance (QA) Inspector observed ZPMC qualified welder 221825 performing Flux Cored Arc Welding process for the weld SSTL4-1J/L located on PCMK fit lug at top of 139m double diaphragm. ZPMC QC Mr. Tu Jun monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-B-T-4332-TC-P4-F.

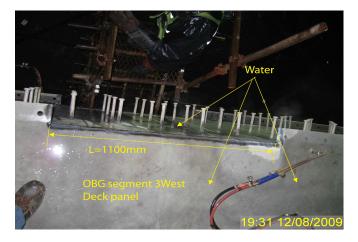
#### **HEAVY DOCK**

#### OBG SEGMENT 3AW

This Quality Assurance Inspector observed ZPMC personnel performed free hand thermal cutting on the counter weight connection plate at PP23 of OBG segment 3AW prior to obtaining Engineering approval. The length of free hand cut was approximately 1100mm and was located 3600mm from the end the segment. For additional information see attached photos. Note: This cutting process was going on in the bad weather conditions (during rain). The incident report was generated for this issue.

Unless otherwise noted, all work observed on this dated appeared to generally comply with applicable contract documents.





#### **Summary of Conversations:**

No relevant conversations.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang +(86) 150.0042.2372, who represents the Office of Structural Materials for your project.

# WELDING INSPECTION REPORT

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**Inspected By:** Utekar, Shrikant Quality Assurance Inspector **Reviewed By:** Dawson,Paul QA Reviewer